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INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : C12N 15/57, 9/68, A61K 38/48, 48/00, C12P 21/06	A3	(11) International Publication Number: WO 97/41824 (43) International Publication Date: 13 November 1997 (13.11.97)
(21) International Application Number: PCT/US97/07700 (22) International Filing Date: 5 May 1997 (05.05.97) (30) Priority Data: 08/643,219 3 May 1996 (03.05.96) US 08/832,087 3 April 1997 (03.04.97) US (71) Applicant: ABBOTT LABORATORIES [US/US]; CHAD 0377/AP6D-2, 100 Abbott Park Road, Abbott Park, IL 60064-3500 (US). (72) Inventors: DAVIDSON, Donald, J.; 4835 Kingsway West, Gurnee, IL 60031 (US). WANG, Jieyi; 5338 Mahogany Court, Gurnee, IL 60031 (US). GUBBINS, Earl, J.; 15646 W. Birchwood Lane, Libertyville, IL 60048 (US). (74) Agents: STEELE, Gregory, W. et al.; Abbott Laboratories, CHAD 0377/AP6D-2, 100 Abbott Park Road, Abbott Park, IL 60064-3500 (US).		(81) Designated States: AU, BR, CA, CN, CZ, HU, IL, JP, KR, MX, NZ, European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the</i> <i>claims and to be republished in the event of the receipt of</i> <i>amendments.</i> (88) Date of publication of the international search report: 8 January 1998 (08.01.98)
(54) Title: ANTIANGIOGENIC PEPTIDES DERIVED FROM PLASMINOGEN (57) Abstract Mammalian kringle (5) fragments of plasminogen and kringle (5) fusion proteins are disclosed as compounds for treating angiogenic diseases. Methods and compositions for inhibiting angiogenic diseases are also disclosed.		

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INTERNATIONAL SEARCH REPORT

In tional Application No
PCT/US 97/07700

A. CLASSIFICATION OF SUBJECT MATTER

IPC 6 C12N15/57 C12N9/68 A61K38/48 A61K48/00 C12P21/06

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 C12N A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
E	WO 97 23500 A (CHILDRENS MEDICAL CENTER) 3 July 1997 see the whole document ---	1-7, 11-23, 26-61
X	S. MCCANCE ET AL: "Amino acid residues of the Kringle-4 and Kringle-5 domain s of human plasminogen that stabilize their interactions with omega-amino acid ligands" JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 269, no. 51, 23 December 1994, MD US, pages 32405-32410, XP002044610 see the whole document --- -/-	1-3,5, 11-13, 17,18, 32-35, 38-61

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
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- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

27 October 1997

Date of mailing of the international search report

06. 11. 97

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Van der Schaal, C

INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 97/07700

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	N. MENHART ET AL: "Functional independence of the kringle 4 and kringle 5 regions of human plasminogen" BIOCHEMISTRY, vol. 32, 1993, pages 8799-8806, XP002044611 see the whole document ---	1-3,5, 11-13, 17,18, 32-35, 38-61
X	DATABASE MEDLINE Accession no 87157752, 1987 T. THEWES ET AL: "Isolation, purification and 1H-NMR characterization of a kringle 5 domain fragment from human plasminogen" XP002044612 see abstract & BIOCHIMICA ET BIOPHYSICA ACTA, vol. 912, no. 2, 8 April 1987, pages 254-269, ---	1-3,5, 11-13, 17,18, 32-35, 38-61
A	O'REILLY M ET AL: "ANGIOSTATIN A NOVEL ANGIOGENESIS INHIBITOR THAT MEDIATES THE SUPPRESSION OF METASTASES BY A LEWIS LUNG CARCINOMA" CELL, vol. 79, 21 October 1994, pages 315-328, XP002015254 ---	
A	WO 95 29242 A (CHILDRENS MEDICAL CENTER) 2 November 1995 -----	

INTERNATIONAL SEARCH REPORT

International application No
PCT/US 97/07700

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons.

- 1 ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
see FURTHER INFORMATION sheet PCT/ISA/210
- 2 ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
- 3 ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

- 1 ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
- 2 ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
- 3 ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
- 4 ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International Application No. PCT/US 97 07700

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Remark : Although claims 19-31 37 are directed to a method of treatment of the human/animal body , the search has been carried out and based on the alleged effects of the compound/composition.

INTERNATIONAL SEARCH REPORT

Information on patent family members

national Application No

PCT/US 97/07700

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9723500 A	03-07-97	AU 1687097 A	17-07-97

WO 9529242 A	02-11-95	US 5639725 A	17-06-97
		AU 2461795 A	16-11-95
		CA 2188813 A	02-11-95
		CZ 9603122 A	14-05-97
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		HU 76095 A	30-06-97
		ZA 9503419 A	11-01-96
